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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,218

06/08/2006

Noboru Hamada

03500.110612.

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7590

12/23/2009

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EXAMINER

ZELASKIEWICZ, CHRYSTINA E

ART UNIT

PAPER NUMBER

3621

MAIL DATE

DELIVERY MODE

12/23/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,218	<b>Applicant(s)</b> HAMADA, NOBORU	
	<b>Examiner</b> CHRYSTINA ZELASKIEWICZ	<b>Art Unit</b> 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-14, 17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) 5-8, 13, 14 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9-12, 17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### **Acknowledgements**

1. This action is in reply to the Amendment filed on August 27, 2009.
2. Claims 1-3, 5-14, and 17-18 are pending.
3. Claims 5-8, 13-14, and 18 were previously withdrawn.
4. Claims 1-3, 9-12, and 17 are examined below.
5. This Office Action is given Paper No. 20091215 for references purposes only.

### **Claim Rejections - 35 USC § 103**

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 9-12, and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. (US 6,378,070), in view of Ishiguro et al. (US 6,360,320), and further in view of Parry (US 2002/0131593).

Claims 1, 9, 11, 17

8. Chan discloses the following limitations:
  - a. said information processing apparatus comprises:

- b. a random number generation unit (by secure printer process) adapted to generate a random number (session key) (abstract, C6 L14-28);
- c. a print data encryption unit (by secure printer process) adapted to encrypt print data (document) by using the random number (session key) as an encryption key (abstract, C6 L14-30);
- d. a transmission unit (print server 130) adapted to transmit the encrypted random number (encrypted session key) and the encrypted print data (encrypted document) to said print control apparatus (secure printer 140) (abstract, C6 L48-52);
- e. said print control apparatus comprises:
- f. a reception unit (secure printer 140) adapted to receive the encrypted random number (encrypted session key), the converted first personal identification code (intended recipient's identity) and the encrypted print data (encrypted document) from said information processing apparatus (abstract, C7 L21-38);
- g. a judgment unit (document store 130) adapted to judge whether or not the first personal identification code converted by said first code conversion unit is the same (recipient is the intended recipient) as the second personal identification code converted by said second code conversion unit (abstract, C7 L8-20);
- h. a print data decryption unit (secure printer 140) adapted to, in the case where said judgment unit judges that the converted first and second personal

identification codes are the same, decrypt the encrypted print data (document) by using the decrypted random number (session key) as a decryption key (abstract, C7 L42-49).

9. Chan does not disclose the following limitations:

- i. A first code reception unit... unit;
- j. A code conversion unit... function;
- k. A random number encryption... key;
- l. A transmission unit... apparatus;
- m. A second code reception unit... unit;
- n. A second code conversion unit... function;
- o. A random number decryption... key.

10. Ishiguro discloses the following limitations:

- p. a code conversion unit (DVD player) adapted to convert the received first personal identification code (ID concatenated with service key) by using a predetermined function (hash function) (abstract, figure 32, C6 L11-25, C7 L12-18, C8 L26-41);
- q. a random number encryption unit (DVD player) adapted to encrypt (encrypts) the generated random number (session key) by using the first personal identification code or the first converted personal identification code (license key) as an encryption key (C7 L29 - C8 L41);

- r. a transmission unit (DVD player) adapted to transmit the converted first personal identification code (license key) to said print control apparatus (personal computer) (C7 L29 - C9 L27);
  - s. a second code conversion unit adapted to convert the received second personal identification code (ID concatenated with service key) by using a predetermined function (hash function) (abstract, figure 32, C6 L11-25, C7 L12-18, C8 L26-41);
  - t. a random number decryption unit (personal computer) adapted to, in a case where said judgment unit judges that the converted first and second personal identification codes are the same (same license key), decrypt the encrypted random number (session key) by using the second personal identification code or the converted second personal identification code (license key) as a decryption key (C7 L29 – C8 L41).
11. Parry discloses the following limitations:
- u. a first code reception unit (host computer) adapted to receive a first personal identification code (PIN), the first personal identification code being input by a user of the information processing apparatus via a first operation unit (P0030);
  - v. a second code reception unit (peripheral device) adapted to receive a second personal identification code (PIN), the second personal identification code being input by a user of the print control apparatus via a second operation unit (P0031-0032).

12. It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute “identity of the intended recipient” for “converted personal identification code” because a personal identification code serves as identity of a recipient. Additionally, Chan teaches the recipient entering a personal identification number to verify himself (C6 L58-67).

13. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ishiguro to show a transmission unit adapted to transmit the converted first personal identification code to said print control apparatus because Ishiguro already teaches 1) transmitting an ID from a personal computer (print control apparatus) to a DVD player (transmission unit); 2) creating a license key, which is a hash value of the ID concatenated with a service key; and 3) only the specific computer decrypting the received text using the same license key as the DVD player (abstract, figure 32, C6 L11-25, C7 L29 - C9 L27). A suggestion exists for the DVD player to transmit the license key (converted identification code) to the personal computer because this helps to identify the text, and another electronic apparatus will not be capable of decrypting the encrypted text by means of a stolen license key (C9 L17-27).

14. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Chan, in view of Ishiguro, with Parry because 1) a need exists to protect sensitive documents from malicious parties that could intercept or monitor the transfer of data between a local computer and network printer, or could read the sensitive document at the network printer (Chan C1 L50-67, C2 L1-5); 2) a need exists to verify the destination apparatus to prevent unauthorized access (Ishiguro C1 L49-55,

C2 L1-32); and 3) a need exists to ensure that unauthorized persons do not obtain access to confidential information (Parry P0005). Inputting a personal identification code and applying a hash function to said identification code can help ensure secure communications and prevent unauthorized access.

## Claim 2

15. Chan, in view of Ishiguro and Parry, discloses all the limitations above. Furthermore, Ishiguro discloses the following limitations:

w. said code conversion unit converts the personal identification code (ID concatenated with service key) by using a one-way function (one-way hash function) (abstract, figure 32, C6 L11-25).

16. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Chan, in view of Ishiguro, with Parry because 1) a need exists to protect sensitive documents from malicious parties that could intercept or monitor the transfer of data between a local computer and network printer, or could read the sensitive document at the network printer (Chan C1 L50-67, C2 L1-5); 2) a need exists to verify the destination apparatus to prevent unauthorized access (Ishiguro C1 L49-55, C2 L1-32); and 3) a need exists to ensure that unauthorized persons do not obtain access to confidential information (Parry P0005). Applying a one-way hash function to the personal identification code can help ensure secure communications and prevent unauthorized access.



Claim 3

17. Chan, in view of Ishiguro and Parry, discloses all the limitations above.

Furthermore, Ishiguro discloses the following limitations:

- x. said code conversion unit generates a hash value (license key) of the personal identification code (ID concatenated with service key) (abstract, figure 32, C6 L11-25).

18. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Chan, in view of Ishiguro, with Parry because 1) a need exists to protect sensitive documents from malicious parties that could intercept or monitor the transfer of data between a local computer and network printer, or could read the sensitive document at the network printer (Chan C1 L50-67, C2 L1-5); 2) a need exists to verify the destination apparatus to prevent unauthorized access (Ishiguro C1 L49-55, C2 L1-32); and 3) a need exists to ensure that unauthorized persons do not obtain access to confidential information (Parry P0005). Generating a hash value of the personal identification code can help ensure secure communications and prevent unauthorized access.

Claim 10

19. Chan, in view of Ishiguro and Parry, discloses all the limitations above.

Furthermore, Chan discloses the following limitations:

- y. a print processing unit (secure printer 140) adapted to execute a print process (prints) of the decrypted print data (abstract).

Claim 12

20. Chan, in view of Ishiguro and Parry, discloses all the limitations above.

Furthermore, Chan discloses the following limitations:

- z. a transmission unit adapted to transmit the encrypted random number, the converted personal identification code and the encrypted print data (see claim 1).

**Response to Arguments**

21. Applicant argues that the PIN in Parry is not used as a key for encryption, as cited in claim 1 (Amendment p 10). Examiner disagrees with Applicant's interpretation of the associated claim limitations.

- aa. Parry is cited to teach two limitations in claims 1, 9, 11, and 17. Neither of these limitations regards a key for encryption. Rather, Parry is cited to teach a first code reception unit to receive a first PIN, and a second code reception unit to receive a second PIN.

- bb. Specifically, Parry discloses a first code reception unit (host computer) adapted to receive a first personal identification code (PIN), the first personal identification code being input by a user of the information processing apparatus via a first operation unit (P0030); and a second code reception unit (peripheral device) adapted to receive a second personal identification code (PIN), the second personal identification code being input by a user of the print control

apparatus via a second operation unit (P0031-0032). Parry clearly teaches both limitations.

cc. Additionally, Parry teaches an encryption module which may utilize *any* encryption technique (e.g. public-key encryption or symmetrical) (P0027); and the PIN in Parry becomes associated with the specific secure print job (P0030-0032).

22. Applicant argues that Ishiguro does not disclose the random number is encrypted, as cited in claim 1 (Amendment p 11). Examiner disagrees.

dd. Ishiguro discloses a random number encryption unit (DVD player) adapted to encrypt (encrypts) the generated random number (session key) by using the first personal identification code or the first converted personal identification code (license key) as an encryption key (C7 L29 - C8 L41).

ee. Specifically, the DVD player generates a source side session key (pseudo random number) and encrypts said session key by using the generated license key (converted personal identification code or the license key, which is created by applying hash function to a concatenation of a unique apparatus ID and a service key) (abstract, C8 L26-67).

23. Applicant argues that Chan does not disclose the document to be sent to a print control apparatus, as cited in claim 1 (Amendment p 11). Examiner disagrees.

ff. Chan discloses a transmission unit (print server 130) adapted to transmit the encrypted random number (encrypted session key) and the encrypted print

data (encrypted document) to said print control apparatus (secure printer 140) (abstract, C6 L48-52).

gg. Specifically, the document store 130 is a process running on a computer; it can be a modified print spooler or print server process (C3 L54 – C4 L5). Thus, the document store is a print control apparatus (computer that controls printing jobs).

hh. Additionally, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Ishiguro to show a transmission unit adapted to transmit the converted first personal identification code to said print control apparatus because Ishiguro already teaches 1) transmitting an ID from a personal computer (print control apparatus) to a DVD player (transmission unit); 2) creating a license key, which is a hash value of the ID concatenated with a service key; and 3) only the specific computer decrypting the received text using the same license key as the DVD player (abstract, figure 32, C6 L11-25, C7 L29 - C9 L27). A suggestion exists for the DVD player to transmit the license key (converted identification code) to the personal computer because this helps to identify the text, and another electronic apparatus will not be capable of decrypting the encrypted text by means of a stolen license key (C9 L17-27).

### **Claim Interpretation**

24. Examiner finds that because the examined claims recite neither “step for” nor “means for”, the examined claims fail Prong (A) as set forth in MPEP § 2181 I. Because

all examined claims fail Prong (A), Examiner concludes that all examined claims do not invoke 35 U.S.C. 112, 6<sup>th</sup> paragraph. See also *Ex parte Miyazaki*, 89 USPQ2d 1207, 1215-16 (B.P.A.I. 2008) (precedential).

ii. Should Applicant amend the claims to recite “means for”, Applicant is respectfully reminded that the specification must have proper antecedent basis for the claimed subject matter. See 37 C.F.R. § 1.75(d)(1), MPEP § 608.01(o), and MPEP § 2181 IV.

25. After careful review of the original specification and unless expressly noted otherwise by Examiner, Examiner concludes that Applicant is not his own lexicographer. See MPEP § 2111.01 IV.

26. In light of Applicants’ choice to pursue product claims, Applicants are reminded that functional recitation(s) using the word and/or phrases “for”, “adapted to”, or other functional language (e.g. see claims 1, 9-10, and 17 which recite “adapted to”) have been considered but are given little patentable weight because they fail to add any structural limitations and are thereby regarded as intended use language. To be especially clear, all limitations have been considered. However, a recitation of the intended use of the claimed product must result in a structural difference between the claimed product and the prior art in order to patentably distinguish the claimed product from the prior art. If the prior art structure is capable of performing the intended use, then it reads on the claimed limitation. *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) (“The manner or method in which such a machine is to be utilized is not germane to the issue of patentability of the machine itself.”); *In re Otto*, 136 USPQ 458,

459 (CCPA 1963). See also MPEP §§ 31.06 II (C.), 2114 and 2115. Unless expressly noted otherwise by Examiner, the claim interpretation principles in the paragraph apply to all claims currently pending.

### Conclusion

27. Applicant's amendment filed on August 27, 2009 necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

28. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

29. Because this application is now final, Applicant is reminded of the USPTO's after final practice as discussed in MPEP §714.12 and §714.13 and that entry of amendments after final is *not* a matter of right. "The refusal of an examiner to enter an amendment after final rejection of claims is a matter of discretion." *In re Berger*, 279 F.3d 975, 984, 61 USPQ2d 1523, 1529 (Fed. Cir. 2002) (citations omitted).

Furthermore, suggestions or examples of claim language provided by Examiner are just that—suggestions or examples—and do not constitute a formal requirement mandated by Examiner. Unless stated otherwise by an express indication that a claim is “allowed,” exemplary claim language provided by Examiner to overcome a particular rejection or to change claim interpretation has *not been addressed* with respect to other aspects of patentability (e.g. §101 patentable subject matter, §112, 1<sup>st</sup> paragraph written description and enablement, §112, 2<sup>nd</sup> paragraph indefiniteness, and §102 and §103, prior art). Therefore, any claim amendment submitted under 37 C.F.R. §1.116 that incorporates an Examiner suggestion or example or simply changes claim interpretation will nevertheless require further consideration and/or search and a patentability determination as noted above.

30. Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to Chrystina Zelaskiewicz whose telephone number is 571.270.3940. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner’s supervisor, Andrew Fischer can be reached at 571.272.6779.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see

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<http://portal.uspto.gov/external/portal/pair> <<http://pair-direct.uspto.gov>>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866.217.9197 (toll-free).

/Chrystina Zelaskiewicz/  
Examiner, Art Unit 3621  
December 15, 2009

/ANDREW J. FISCHER/  
Supervisory Patent Examiner, Art Unit 3621